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GLOBAL BANK REVIEW: DIGITISATION AND DECARBONISATION – A DELICATE BALANCE

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Legal Briefings – By **Alex Cravero**

A new wave of potent digital tools promise to super-charge finance houses' climate efforts. But there's a catch.

The financial services sector may be making sustained efforts to tackle decarbonisation but even good intentions – and actions – bring risk. Headlines in the aftermath of the COP26 climate summit in November 2021 made clear the finance industry is now part of the scramble of corporates pledging carbon neutrality by 2050, with capital providers under scrutiny as key influencers for the wider economy. Institutions such as UBS, HSBC and Aviva are just a handful of those announcing net-zero ambitions.

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Such public commitments should not be dismissed but measuring and reporting progress against these ambitions remains an intractable challenge. According to the widely-used GHG Protocol Corporate Standard, carbon accounting must address not only emissions generated through a businesses' own operations but those emerging through its value chain. For financial institutions, this includes any lending and investments. The question this begs is how an organisation can account for actions beyond its immediate control.

That is where digital transformation could play a crucial role with new technologies streamlining financial infrastructure and vastly improving visibility on emissions data. Yet, like many apparent win/win scenarios, a sizeable catch remains: financial institutions must account for energy demands of increased computing power for such emerging tools, or risk taking one step back for every two forward.

BLOCKCHAIN – NOW AVAILABLE IN GREEN

One aspect of digitisation worth exploring is blockchain technology. Lenders are already increasingly turning to distributed ledger platforms to simplify resource-intensive infrastructure and swap information in real time. And, with the campaign group the World Wide Fund for Nature reporting that the UK finance sector is responsible for emissions of 805 million tonnes of carbon dioxide equivalent (CO_2e) each year, the industry's role cannot be ignored. After all, the secure and instant sharing of data across network participants could deliver much needed transparency over carbon emissions in the supply chain.

And by underpinning digital assets like cryptocurrencies, blockchain may help financial institutions eliminate emissions associated with payment cards. The carbon footprint of each card may not sound like much at 150 grams CO_2e but, with approximately 97 million cards in circulation in the UK, it may be possible to save around 15 tonnes of CO_2e and 500 tonnes of plastic by moving to digital assets.

Yet it remains incumbent on financial institutions to do careful due diligence if they want to unlock the environmental benefit of blockchain. It takes significant power to run networks that use 'proof-of-work' consensus mechanisms, with the resulting energy consumption generating vast carbon emissions. Take Bitcoin, for example, which consumes 123 terraWatts of energy annually (and growing) and has a carbon footprint comparable to Norway.

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Here it is worth noting that blockchain has advanced over recent years and modern platforms now typically use alternative consensus mechanisms such as 'proof-of-stake'. This can slash the energy needed to run these networks by up to one million times compared to Bitcoin, putting this potent technology squarely back in the arsenal for financial institutions tackling climate change.

ARTIFICIAL INTELLIGENCE – POWERFUL BUT STILL HUNGRY

There is also the option of drawing on artificial intelligence (AI) tools. Known for its ability to analyse and 'learn' from vast sources of data, AI offers institutions the chance to gain deeper insights into their business and value chain, helping to drive enhanced decision making.

And many observers see AI as an increasingly essential tool for monitoring carbon emissions. Solutions such as OneView from BBVA – not to mention a comparable system being developed by NatWest and Microsoft – can analyse vast information and provide insights to customers to help them quantify, report and reduce the carbon footprint generated by their daily activities.

To further advance this analysis, AI can forecast future carbon emissions based on historic performance and trends identified from data fed into the model. This may help financial institutions understand and manage the emissions of their value chain, while also supporting their own carbon accounting.

AI is, however, another power-hungry technology. According to researchers at the University of Massachusetts, training large AI models can emit more than 284 tonnes CO2e.

So the message is clear. While products are being rapidly developed, until compelling and relatively green solutions emerge, financial institutions must do thorough analysis and decide whether the benefits of using various digital tools yet outweigh the drawbacks. Because one day soon, they surely will.

This article is part of our 2021 Global Bank Review – ESG: Creating a purposeful future, an annual publication by our Global Banks Sector Group.

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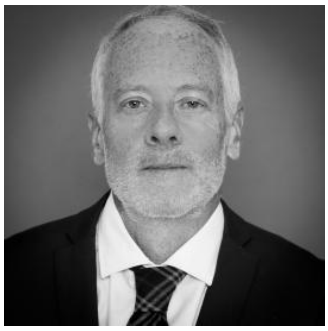

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